

## ABSTRACT

A method and apparatus for increasing the bandwidth of a memory controller system are provided. According to the invention, data received at an interface of a memory controller system is compressed in the memory controller by a compression engine for storage in associated memory. The address of the data written to memory is maintained in a memory controller. When data is read from the memory for provision to an interface of the memory controller, the memory manager retrieves the data from memory and provides it to a decompression engine. The decompression engine restores the data to its original, uncompressed form. The data is then provided to the appropriate interface.